OREGON BUSINESS REVIEW

BUREAU OF BUSINESS RESEARCH, SCHOOL OF BUSINESS ADMINISTRATION
UNIVERSITY OF OREGON, EUGENE, OREGON
WESLEY C. BALLAINE, EDITOR

FILE COPY
Bureau of Business and Economic Research

VOL. V, NO. 10 OCTOBER 1946

PROGRESS TOWARD IMPROVED USE OF TIMBER WASTES

J. B. GRANTHAM

Associate Professor of Wood Products, Oregon State College

The forest-products industries of Oregon, including logging, lumbering, pulp and paper production, plywood manufacturing, and others dependent on the forests for raw material, comprise the most important industrial group in the state of Oregon, from the standpoint of the value of products and the number of industrial employees. The value of products of these industries approached $300,000,000 annually during the war years, and the number of industrial employees exceeded 70,000 men. Thus any developments which improve the utilization of the forest resource will materially benefit the state's economy.

A most encouraging development in this direction is the increased wood volume per acre which logging companies are recovering from timbered lands of western Oregon.

As early as 1919 the forest industries showed their awareness of the waste which occurred in logging through sporadic attempts to recover some of the wood values left on the ground. But despite the consciousness of the problem, the efforts to recover logging waste proved impracticable until the wartime demand for lumber created greater profit margins.

In 1926 and 1927, A. H. Hodgson of the U. S. Forest Service made a comprehensive study of logging waste in the Douglas fir region of western Oregon and Washington, which not only revealed the amount and character of the wood material left on the ground, but cited the reasons for the seemingly excessive waste. It was unfortunate that his results were made available at the beginning of the last depression, when economic conditions prevented the adoption of his recommendations for better utilization.

Hodgson's study revealed that in 1926 and 1927 the total forest waste in western Oregon and Washington amounted to more than 3 billion board feet or 6 million cords per year. By way of comparison, the peak wood consumption of the Pacific Northwest's pulp industry has been 3 million cords. The waste material considered in Hodgson's total included tree tops, broken or defective logs, excessive stump heights, and small trees knocked down in logging or left to be fire killed or wind thrown. Any piece measuring four inches in diameter and four feet in length was included. The total amounted to approximately 20 per cent of the original timber stand or one-fourth of the wood volume removed in logging.

Subsequent investigations and recent salvage operations have supported these findings. Despite the fact that

(Continued on page 2)

HISTORY OF THE "KEEP OREGON GREEN" MOVEMENT

ARTHUR W. PRIAULX

Public Relations Director for Oregon, West Coast Lumbermen's Association

Ten-year-old Peter Mashik of Gladstone cast his fly far out on the whirling waters of the upper Clackamas River, into a likely-looking spot where experience suggested a big fish might be waiting for his special brown upright. As his fly settled in the riffle Pete glanced down proudly at the Green Guard emblem on his arm and his eyes dwelled for an extra moment on the two bars which signified that he was captain of his Green Guard troop.

Suddenly above the sound of the river he heard a sharp crackling sound; right where a man had been fishing on the opposite bank a few minutes before, a small fire was burning. Pete was on the alert instantly, recalling his instructions as a Green Guard to report a fire at once, if you can't put it out. But it was miles to the nearest telephone, and Pete knew that, before he could get help, the whole mountain of young green timber would be burned.

"Boy, but this water's cold," Pete half-shouted to himself as, naked, he plunged into the current. "That guy must have thrown his cigarette into the dry grass. Maybe I can put it out if I can get there quickly enough."

For twenty minutes young Pete was a whirling dervish in his birthday clothes. With a flat piece of driftwood he shoveled sand on the fire; when he had it slowed down he took some green willows and dipped them in the river and beat the fire with them. Finally not a spark was left, just a large blackened area about thirty feet square on the edge of a tinder-dry forest.

Pete Mashik was feted in the newspapers and given an honor badge by the Keep Oregon Green Association. Like many of the 22,000 Green Guards, boys and girls from 8 to 18 in Oregon, he had won his spurs in the publicly sponsored drive to prevent forest, field, and farm fires. Last year 157 fires were reported by these keen-eyed youngsters who use the woods as their summer playground.

But the part played by the Oregon Green Guards is but one phase of the remarkably effective campaign to reduce man-caused fires in Oregon.

In 1940, a group of citizens, led by lumbermen from Oregon and Washington, appalled at the terrible destruction wrought in America every year as 200,000 man-caused fires burned over forest areas as large as the state of New York, decided to do something about it.

From a series of conferences came the idea of a fire-prevention program, to be named, happily, "Keep Oregon Green" and "Keep Washington Green." Timberland

(Continued on page 2)

HISTORY OF THE "KEEP OREGON GREEN" MOVEMENT

(Continued from page 1)

owners, sawmill men, banks, railroads, and citizens donated funds. The campaign should be educational, these men decided—an appeal to every man, woman, and child in our two states.

Through the newspapers, over the radio, from pulpit, and before every sort of meeting, and by posters and direct mail, the campaign was launched. "Help Keep Oregon Green" was the theme. "You, too, can be a fire warden, and Keep Washington Green," a poster proclaimed.

Radio stations entered into the spirit of the campaign, gave valuable time for spot announcements, prepared dramatizations, and carried the message in newscasts. Practically every one of Oregon's 122 daily and weekly newspapers gave news, editorial, and advertising support. The same type of support came from Washington.

Stewart Holbrook, nationally famous writer and author of books on logging and history, was employed by the Keep Washington Green organization at its start, and for two years developed a magnificent public-relations and mass-education appeal. In Oregon a slightly different approach through a central committee, led by enthusiastic Edmund Hayes, lumberman and forest owner, got equally splendid results.

After two years, a noticeable drop in the number of man-caused forest fires was reported. During the ten previous years, Oregon had burned 125,000 acres annually and 1,300 man-caused fires had been started each year. Washington's record was as bad. Man-caused fires in Oregon dropped from 1,300 to less than 400, and acreage destroyed from 125,000 to less than 7,500.

The "Keep Green" programs are now six years old, and in both Oregon and Washington these highly important public-appeal campaigns have borne fruit. Fires have been reduced. But, equally as valuable, the entire citizenry has become forest conscious, and fire-prevention conscious. Now service clubs, schools, churches, granges, commercial organizations, Boy and Girl Scouts, 4-H clubs, and hundreds of groups throughout the two states are giving active support to the campaign.

Fern burning, which in the past has destroyed millions of acres of valuable young forests, has practically stopped, in large part because of the educational campaign conducted by Keep Oregon Green. Campfires are watched more carefully by an informed public, and cigarette smokers, if they read or can listen to the radio, know that smoking is dangerous if they are traveling in the woods. "Use your ash tray" is an effective slogan constantly confronting car travelers.

Oil companies every summer support the drive with handsome outdoor boards in color along the highways. The Oregon State Highway Commission has erected many signs at danger points. Thousands of automobiles carry attractive decals on windshield or back window, or have license plates carrying the Keep Oregon Green message.

County committees are organized in each of the thirty-six Oregon counties. Governor Earl Snell and his predecessor, Governor Charles Sprague, both gave official support to Keep Oregon Green; under a recent incorporation move, Governor Snell is the official state executive of Keep Oregon Green, now virtually a semipublic organization. Dean Paul M. Dunn, dean of the School of Forestry at Oregon State College, is chairman of the state group.

So effective has been the work of this "Keep Green" movement in both Oregon and Washington that many other states have, with aid from the Northwest, undertaken similar organizations with splendid results. Alabama, Oklahoma, and Louisiana were first under the wire with "Keep Green" programs, then came all of New England, some of the lake states, and recently Idaho and Montana, all sparked from our original ideas.

"Keep America Green," patterned largely on the experience and organization developed and expanded here in Oregon and Washington, now seems just around the corner, in fact is already used as a slogan by the American Forest Products Industries, Inc., of Washington, D. C.

We are justly proud of this wonderful program, and especially happy at the manner in which our citizens have individually and as groups joined so wholeheartedly into the spirit of the movement.

PROGRESS TOWARD IMPROVED USE OF TIMBER WASTES

(Continued from page 1)

forest utilization improved markedly during the war years, a tremendous volume of potentially usable wood was still being left on the ground. One investigator found that, on the area covered by his survey, the gross amount of material left following logging in 1943 was only one-half of the amount left in 1939, but that, even in 1943, 34.8 cords net of usable wood remained in the average acre of cutover land examined.

The several studies indicate that, for western Oregon and Washington as a whole, 25 per cent more volume might be recovered from old-growth timber stands. This means that, if 8 billion board feet of the 9.4 billion foot average wartime cut came from old-growth stands, the potential addition to the region's cut amounts to 2 billion board feet or 4 million cords annually.

First Large-Scale Salvage Experiment. The first large-scale attempt to recover logging waste which gave promise of economic success was that conducted by the Comox Logging and Railway Company of British Columbia, in cooperation with the Powell River Company and the British Columbia Forest Service. This pulpwood salvage operation was initiated in May 1943 and completed in July 1944. During that time an equivalent of 2 million board feet of logs was recovered from 260 acres of cutover land.

The original timber stand was a 250-year Douglas fir-

hemlock stand similar to the high-slope forests of the Cascades in Oregon, and had yielded 30,500 board feet per acre under close initial logging. The second or relogging operation yielded an average of 8,000 board feet per acre; the recovered waste wood amounted to 26 per cent of the volume removed in the first operation.

A large portion of the recovered volume came from under-story hemlock trees which were too small to be removed economically for sawlogs in the original logging. Another 30 per cent of the salvaged wood came from the tops of trees cut for sawlogs, and the balance from broken chunks and occasional logs missed in the first operation.

Small crews and light logging equipment were employed. Much of the equipment was designed in the logging company's shops. The average man-day production during periods of relatively high operating efficiency was 145 cubic feet or only 21 per cent below the average for normal pulp-log production in British Columbia.

Current Salvage Operations of Pulp Companies. In 1945, the Crown-Zellerbach Corporation acquired a 45,000-acre tract of forest land in Clackamas County, one-third of which had been cut over during the period from 1939 to 1945. In October 1945, the company initiated a salvage program, employing contractors to relog this cutover land. During the first eight months of operation this program produced 27 million board feet of salvaged logs.

Because of the larger size of the original timber and heavier concentration of residual wood, reported to average 27,000 board feet per acre, the recovery costs have been somewhat lower than those obtained by the Comox Logging Company. An appreciable amount of the salvaged logs have come from standing trees which were considered unmerchantable at the time of the original logging. The salvaged wood has been predominately Douglas fir; hemlock and white fir have deteriorated more rapidly than Douglas fir during the four or five years that have elapsed since the time of initial logging.

The several contractors engaged in this relogging operation generally employ the same logging methods used in the initial operation. However, lighter equipment and smaller crews are used, so that smaller logs or more-defective logs can be removed at a profit in this secondary logging. Enough large defective logs are recovered to make up bunk loads as a foundation for short pieces and thus permit the use of conventional log trucks and trailers for hauling.

Salvaged logs from this operation are trucked 28 to 30 miles to the Willamette River over a private logging road, with loads averaging 24 to 25 tons. The trucks pass over a platform scale on the way to the river, and all contractors are paid on a tonnage basis, regardless of species or log grade. The salvaged logs are separated in the river into rafts for towing to sawmills and rafts to be towed to the Crown-Zellerbach pulp mill at Camas. Thus far about 60 per cent of the recovered wood has been used for lumber production and 40 per cent for pulp production.

This same pulp company is conducting another relogging operation in the coastal forests of northwestern Oregon. This salvage operation is particularly interesting, in that a specially constructed, tractor-mounted steel tower is used for relogging. This logging unit, because of its extreme flexibility, has been employed for logging blowndown and bug-killed timber, as well as for relogging. Since it can move over truck or tractor roads and can be moved and set up in an hour's time, it gives promise of being an ideal unit for salvaging small-sized logging waste.

The material recovered on this salvage operation is chiefly spruce and hemlock. The wood is loaded on conventional logging trucks and trailers equipped with 42-inch stakes on the log bunks. The stakes facilitate loading (as many as thirty-five pieces may be required to make up an average load). Loads are wrapped in two or three places with steel bands when the truck reaches the dump, so that the entire truck load may be handled as a unit in booming and rafting.

The St. Helens Pulp and Paper Company has also undertaken a program for the recovery of wood from cutover land. This company purchased a 25,000-acre tract from which the sawtimber had been removed over a 30-year period. In relogging 40 acres of the more recently cutover land on this tract, the company recovered over 1¼ million board feet or an average of more than 30,000 feet per acre.

Present and Potential Uses of Salvage. The varied uses which pulp companies have made of salvaged wood indicate some of the developments that must take place to assure the complete utilization of the material left after logging.

The Powell River Company, after using the entire output of the Comox Logging and Railway Company's recovery experiment for groundwood newsprint, reported in part: (1) That salvaged material should be limited to 15 per cent of the total wood used for newsprint production. (2) That, although logging waste could be used in mixture for groundwood pulp, the salvaged wood should be segregated by species for best results. The material recovered in this experiment was 68 per cent hemlock, 26 per cent Douglas fir, with some white pine and cedar. (3) That the waste would be more suitable for sulphate pulp and could best be used for fiberboard production.

As mentioned above, the Crown-Zellerbach Corporation has disposed of a large portion of its salvaged material to sawmills—especially where the material included a high percentage of Douglas fir.

Three factors indicate the desirability of using logging waste for lumber production as well as for pulp. Briefly, these are: (1) The accumulating waste is more than one-half Douglas fir, while the pulp industry of the region is based primarily on the use of other species. (2) The production of board products, in which salvaged wood can be most satisfactorily used, is still small in this region. (3) Many of the areas where logging waste is accumulating, especially those in southern Oregon, are too far from existing pulp mills to permit economical transportation.

Recovery for Lumber Production. In view of these facts it is very encouraging to note that many operators are now salvaging logging waste for lumber production. The Crown-Zellerbach Company, on its Clackamas County operation, not only sells all sawlog grades to sawmills but has interested one lumber company in setting up a portable sawmill in the woods. This small mill is operating entirely on slash-burned logs and snags, converting these into cants or timbers for remanufacture. The mill owner has reecntly purchased a small semiportable sawmill which also will be used to produce lumber from burned logging waste.

In Columbia County, Oregon, the Crown-Zellerbach Corporation has recently acquired 55,000 acres of cutover and restocked land for a tree farm. Five to six thousand acres of this property have been cut over within the past six years and are considered suitable for salvage operations. The usable material on the ground is principally Douglas fir and cedar. The salvage contractors are following a practice of hauling all No. 2 and better sawlogs to the Columbia River, where they are rafted and sold on the open market. No. 3 sawlogs and wood logs which cannot be hauled 30 miles to the river profitably are delivered to two small sawmills nearby. The lumber produced at these mills is picked up by truck and hauled 50 miles to Portland. All of the salvaged cedar is delivered to a shingle mill in the vicinity. This particular operation illustrates two very real benefits of relogging programs which may be difficult to measure in dollars and cents but which are of great significance to the region.

(1) The Crown-Zellerbach Corporation expects to defray the cost of setting up its protection program for the tree farm through stumpage returns on recovered waste. Not only will these returns help to offset the cost of establishing and maintaining an adequate protection road system, but the removal of the material from the ground will facilitate fire control.

(2) The sawmill town of Vernonia, Oregon, located near the center of this tree farm, has been almost completely dependent upon a large sawmill which will cut out in a few years. The present salvage program will provide relatively few jobs in comparison to the departing sawmill. However, the fact that values will be obtained from the surrounding cutover land while the fast-growing second-growth stands are maturing has given this town new hope. New construction and modernization are in evidence where only a year ago store buildings were being boarded up.

Of further interest in connection with the production of lumber from logging waste are the programs of two companies that have recently built portable sawmills to operate in the woods. The plan is to yard logging waste direct to the mill and cut cants or timbers which can be further manufactured at a larger mill. In this way all unusable material will be left in the woods and trucks will haul out 100 per cent pay loads. Furthermore, the lumber can be piled in packages and loaded quickly, whereas the small logs and chunks used for the production of this lumber would be expensive to load. These companies have not yet had sufficient operating experience with their portable mills to provide information on recovery values.

Results of previous studies indicate that the lumber cut from small down trees and sound tops will average No. 1 Common. On areas where the original timber stand was larger and more defective, the average grade may be No. 2 Common, but production costs should be less because of the larger log sizes.

One Oregon operator has been conducting an experiment in clean logging for the past several months. With a short haul to the sawmill (averaging 10 to 12 miles), this operator has been able to utilize the stand very closely. Residual wood on the ground has been reduced to 5,700 board feet per acre, principally in the form of small knocked-down or wind-thrown trees and small tops. The average recovery per acre is more than 50 per cent greater than the average of five years ago. The mill's production has been maintained in spite of the reduced quality and size of the logs cut, but the average lumber recovery has dropped one grade.

Although most sawmills are not located so favorably with respect to their timber supply, this operation serves as an indication of what might be done through the use of small breakdown mills located near the woods.

Problems of Waste Recovery. It is evident that there are still a great many problems to be met before there can be a high degree of utilization in the woods. However, the many benefits to the state's economy which are obtainable through the more complete utilization of logging waste are such that these problems will be overcome.

Labor and equipment shortages will continue to retard the expansion of salvage activities for some time. Skilled woods and mill labor is still critically short, and equipment manufacturers are still buried under back orders. The development of lighter, more flexible woods equipment and portable mills suitable for salvage work is still in the experimental state. This is also true of the wood-handling facilities of many pulp mills; in general the wood rooms are not well adapted to the handling of small-sized logging waste.

A more universal adoption of a fair measurement for small material is needed. The wood recovered in the Comox Logging Company experiment was equivalent to 2 million board feet of pulp logs for pulp production, but would have scaled only 1,060 thousand under established scaling practices. Such a salvage operation would be economic suicide if the wood had been sold by board feet.

A realistic system of measurement must be applied not only to the sale of salvaged material but also to all steps of the recovery operation, starting with falling and bucking, if the operator is to measure his production costs and select the material which can be recovered profitably.

The system of paying for salvaged material on a weight basis has much to recommend it from the standpoint of simplicity, although loads must still be checked at some point for cull material. One encouraging step in the direction of a more equitable system of measuring small logs

is the regional adoption of the Sorenson cubic-foot rule for logs 13 inches or less in diameter. Small logs may now be bought and sold by the cubic foot or board foot. For a 10-inch log, 32 feet long, the comparative values are $3.00 by the Sorenson cubic-foot rule and $2.07 by the Columbia River board-foot rule.

Another problem requiring attention is a better segregation of species and grades, and the allocation of each class of material to the market which can best utilize that class. In this connection, much more information is needed concerning the yield and quality obtainable from various classes of logging waste, whether it be used by pulp mills, board mills, or sawmills.

Careful study of the best means of coordinating salvage logging with initial logging is needed to insure the recovery of maximum values without interfering with the regular operation. Thus far, most salvage logging has been conducted on areas logged four or five years previously. This permits the salvage of several years accumulation of waste, but means the loss of considerable wood volume through sap rot and borer damage.

In spite of the many problems which must be solved in order to expand relogging activities, it seems reasonable to predict that logging waste recovery will soon reach 500 million board feet per year or one-fourth of the annual waste accumulation in western Oregon and Washington. Greater recovery than this may have to await increased chemical utilization of wood or an expanded production of mechanically reduced fiber.

Values of Waste-Recovery Programs. A recovery program should be able to add 25 per cent to the volume removed from an individual operation in old-growth timber—and the time has arrived when this 25 per cent is of vital importance. To some operators this recoverable volume may mean the difference between a sustained operation or a liquidating operation. To the state it may mean the difference between maintaining maximum production or reducing production below demand. To the lumber user it means an additional volume of fine-grained lumber, which, in spite of such characteristics as sound stain, is superior to second-growth lumber for many uses.

It should also be mentioned that relogging programs aid in the establishment of the next timber crop by improving the seed bed, facilitate the protection of the succeeding crop by reducing the resistance to fire control, and in most instances eliminate the expense and hazards of slash burning. Considering all of these benefits, the Douglas fir region of the state of Oregon has a tremendous stake in promoting this new standard of utilization in the woods.

MONEY MARKET IN SEPTEMBER

Major developments in the money market during the past month included moderate declines in Government bond prices, apparently in sympathy with the sharp decline in stock prices and the more limited recessions in corporate bond prices, and considerable pressure on member-bank reserve positions which resulted chiefly from Treasury debt transactions and income-tax receipts, and to a lesser extent from a seasonal increase in currency in circulation and increased reserve requirements. Member-bank demands on Federal Reserve credit were consequently substantial during most of September.

There were further signs of stiffening short-term interest rates in the money market in September in the form of somewhat higher quotations on commercial paper; long-term interest rates also rose slightly as bond prices reacted in sympathy with the sharp setback in the stock market. Government bond prices declined about ½ to ⅝ of 1 point in the first three weeks of the month and then showed some recovery in the last week. The recession in "Governments," however, goes back to March and early April when the various issues reached peak levels. Prices of the Victory Loan 2½s of 1967-72 have fluctuated more widely during the year than most other issues (exemplified by the 2s of December 1952-54, eligible for bank investment, and the 2¼s of 1956-59, ineligible until September 15, 1946), having risen from 101½ in January to 106½ in early April and then fallen below 102 during September.—*Monthly Review*, Federal Reserve Bank of New York, Oct. 1946.

OREGON EMPLOYMENT AND PAYROLLS

The table below shows, by counties, the number of employees covered by the Oregon Unemployment Compensation Act during the three months of the second quarter of 1946, and the total payrolls covered during the second quarter and first half of the year. The figures have been provided by the Oregon Unemployment Compensation Commission.

County	Employment April	Employment May	Employment June	2nd Quarter 1946	1st Half 1946
Total, Oregon	257,765	265,247	274,026	$164,965,339	$308,650,458
Baker	1,887	2,055	2,180	1,134,399	2,023,937
Benton	2,800	2,905	2,955	1,580,536	2,909,638
Clackamas	6,166	6,270	6,548	3,667,499	6,954,094
Clatsop	5,426	5,926	6,272	3,435,336	6,302,729
Columbia	3,141	3,252	3,288	2,003,903	3,739,917
Coos	7,025	7,463	7,610	4,796,966	8,748,605
Crook	891	895	928	632,295	1,106,836
Curry	241	272	267	130,248	214,386
Deschutes	3,447	3,487	3,454	2,146,322	4,192,567
Douglas	5,452	5,746	5,827	3,618,211	6,712,769
Gilliam	101	99	104	45,365	111,369
Grant	602	657	685	337,069	576,320
Harney	873	933	937	628,221	1,152,328
Hood River	862	1,001	1,011	530,814	915,097
Jackson	6,187	6,542	6,737	3,855,838	7,104,571
Jefferson	187	199	206	144,735	255,260
Josephine	2,288	2,459	2,505	1,357,633	2,410,019
Klamath	7,810	8,428	8,708	5,177,033	9,737,175
Lake	718	896	886	590,974	971,147
Lane	15,137	15,419	15,191	9,154,840	16,942,334
Lincoln	3,197	3,438	3,565	1,964,350	3,485,278
Linn	7,398	7,947	8,057	4,839,861	8,516,540
Malheur	1,359	1,422	1,554	727,214	1,328,993
Marion	9,944	10,623	13,030	6,605,679	12,228,662
Morrow	216	226	234	139,519	267,386
Multnomah	127,054	128,199	130,241	82,712,220	163,377,649
Polk	2,819	2,636	2,997	1,738,276	3,138,232
Sherman	37	37	60	26,718	48,789
Tillamook	2,202	2,199	2,207	1,278,388	2,395,491
Umatilla	3,971	4,151	5,788	2,595,380	4,577,689
Union	1,517	1,652	1,686	820,372	1,562,534
Wallowa	431	494	490	222,358	421,958
Washington	1,842	1,698	1,698	746,117	1,902,119
Wasco	2,533	2,871	3,109	1,715,355	3,092,567
Wheeler	243	293	315	314,638	445,436
Yamhill	3,437	3,648	3,575	1,995,152	3,701,344
Multicounty (statewide operations)	18,324	18,809	19,121	11,355,505	15,078,693

CURRENT BUSINESS TRENDS IN OREGON

BANK DEBITS

Bank debits represent the dollar value of the checks drawn against individual bank deposits. Approximately 90 per cent of all goods, property, and services is paid for by check. Bank debits are regarded as indicators of the general trend of business, though their value for this purpose may be impaired by substantial changes in the general level of prices. The Bureau of Business Research collects bank debits from 92 banks and branches monthly. On occasion, the totals for the same month in different issues of the *Review* are not directly comparable because of necessary adjustments in basic data.

Marketing Districts	*Number of Banks Reporting*	*Debits Aug. 1946*	*Debits July 1946*	*Debits Aug. 1945*	*Aug. 1946 compared with July 1946*	*Aug. 1946 compared with Aug. 1945*
Oregon	85	$753,929,738	$782,247,704	$630,602,857	− 3.2%	+19.6%
Portland (Portland, Hillsboro, Oregon City, etc.)	26	457,884,697	510,223,222	444,444,186	−10.3	+ 3.0
Lower Willamette Valley (Salem, McMinnville, etc.)	8	63,055,598	65,060,074	39,948,101	− 3.1	+57.8
Upper Willamette Valley (Albany, Corvallis, Eugene, etc.)	9	73,163,805	59,573,204	42,214,093	+22.8	+73.3
North Oregon Coast (Astoria, Tillamook, etc.)	5	21,401,936	16,416,807	16,492,647	+30.4	+29.8
Douglas, Coos Bay	4	15,656,690	14,412,561	9,921,348	+ 8.6	+57.8
Southern Oregon (Ashland, Medford, Grants Pass)	5	32,231,781	28,618,510	18,906,362	+12.6	+70.5
Upper Columbia River (The Dalles, Hood River, etc.)	6	16,436,445	13,279,113	10,548,824	+23.8	+55.8
Pendleton area	6	19,443,368	15,812,447	11,970,692	+23.0	+62.4
Central Oregon (Bend, Prineville, Redmond)	3	8,018,133	7,645,544	5,460,995	+ 4.9	+46.8
Klamath Falls, Lakeview area	4	24,282,777	31,357,105	16,508,503	−22.6	+47.1
Baker, La Grande area	6	14,732,918	13,066,659	9,276,905	+12.8	−41.2
Burns, Ontario, Nyssa	3	7,621,590	6,782,458	4,910,201	+12.4	+55.2

RETAIL SALES

The sales of a state-wide sample of 438 independent retail stores, collected by the Bureau of the Census, give an indication of trading activity and retail distribution. These figures are often interpreted as indicating purchasing power.

BY MARKETING DISTRICT

	Aug. 1946 compared with July 1946	*Aug. 1946 compared with Aug. 1945*
Oregon	+15.0%	+39.4%
Portland	+17.6	+34.6
Lower Willamette Valley	+11.4	+55.8
Upper Willamette Valley	− 9.9	+17.6
North Oregon Coast	+14.7	+53.1
Douglas, Coos Bay	+ 9.8	+60.4
Southern Oregon	+14.9	+35.6
Upper Columbia River	+ 8.8	+85.0
Pendleton	− 0.2	+48.4
Central Oregon	−14.7	+48.0
Klamath Falls, Lakeview	+ 6.1	+42.1
Baker, La Grande	+19.3	+51.1
Burns, Ontario	+10.0	+44.4

BY TYPE OF OUTLET

	Aug. 1946 compared with July 1946	*Aug. 1946 compared with Aug. 1945*
Oregon	+15.0%	+39.4%
Department stores	+19.1	+41.0
Food stores	+ 9.1	+23.3
Eating and drinking establishments	+ 0.7	+ 1.9
Drug stores	+ 3.7	+25.8
Apparel stores	+21.8	+25.0
Motor vehicle dealers	+ 8.2	+105.7
Furniture, household, radio	+ 8.1	+80.7
Lumber, building, hardware	+14.5	+36.4

BUILDING PERMITS

Building permits give an indication of building operations planned rather than actual construction under way. Care must be taken, in interpreting these data, to allow for the lag which may elapse between the issuance of the permit and the beginning of actual construction. The data have been collected by the Bureau of Business Research.

	New Residential Aug 1946	*New Nonresidential Aug. 1946*	*Additions, Alterations & Repairs Aug. 1946*	*Totals Aug. 1946*	*Totals July 1946*	*Totals Aug. 1945*
Albany	$ 35,500	$ 8,000	$ 36,325	$ 79,825	$ 29,950	$ 41,800
Astoria	17,300	95,400	33,365	146,065	30,330	45,672
Baker	2,650	850	13,550	17,050	36,375	2,800
Bend	26,100	6,750	5,815	38,665	64,920	6,925
Coos Bay	1,500	5,200	5,800	12,500	14,700	4,300
Corvallis	88,900	5,900	13,840	108,640	96,250	48,255
Eugene	66,400	29,175	62,362	157,937	189,100	136,860
Grants Pass	179,000	41,230	10,030	230,260	90,240	35,675
Klamath Falls	3,000	...	61,787	64,787	65,205	48,500
La Grande	55,800	4,225	13,970	73,995	39,047	10,975
Medford	71,300	14,900	13,193	99,393	*	78,764
Oregon City	32,500	2,350	4,400	39,250	79,590	14,280
Pendleton	8,400	11,050	4,950	24,400	35,186	6,285
Portland	1,193,350	984,035	437,170	2,614,555	4,001,870	909,885
Salem	123,300	31,065	66,793	221,158	234,310	149,920
The Dalles	81,800	1,950	15,300	99,050	18,795	15..225
28 other communities	474,950	276,740	54,499	806,189	675,241	566,240
Total	$2,461,750	$1,518,820	$ 853,149	$4,833,719	$5,701,109	$2,259,361

* No report.

MANUFACTURING EMPLOYMENT

(Source: San Francisco Regional Office, Bureau of Labor Statistics)

Industry	*July 1945*	*June 1946*	*July 1946*
All manufacturing, total	164,800	119,300	121,000
Lumber & timber basic products	49,700	56,600	57,700
Furniture & finished lumber products	4,900	6,300	6,200
Iron, steel products	4,300	4,100	4,100
Transportation equipment	62,900	6,600	6,600
Machinery, except electrical	4,000	2,700	2,900
All other durable goods	3,700	3,700	3,700
Total, durable goods	129,500	80,000	81,200
Food & kindred products	20,100	21,300	21,700
Textile-mill products	2,900	3,700	3,700
Apparel & other finished fabrics	2,000	2,200	2,300
Paper & allied products	4,000	4,800	4,800
Printing & publishing	2,700	4,200	4,100
Total, nondurable goods	35,300	39,300	39,800

PORTLAND FOOD PRICE INDEX

August 15, 1946

(Source: San Francisco Regional Office, Bureau of Labor Statistics)

During the month ending August 15 food prices in Portland rose 3.6 per cent, with the index reading 182.1 (1935-1939 average being 100). Higher prices for bread, meats, and eggs were the principal causes of this increase. As in most other Pacific Coast cities, butter declined in price, but in Portland this was accompanied by a rise in the price of margarine. On August 15 food prices were 21 per cent above VJ Day and 90 per cent higher than they were in August 1939.

Dun and Bradstreet report that there was one commercial failure in Oregon in August 1946, involving liabilities of $18,000. This compares with two failures in July 1946 with liabilities of $43,000, and no failures in August 1945.